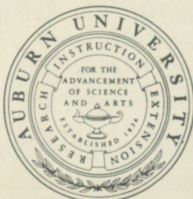


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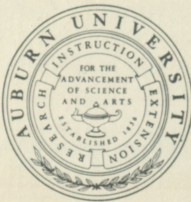
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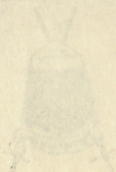
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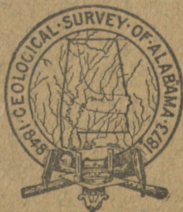
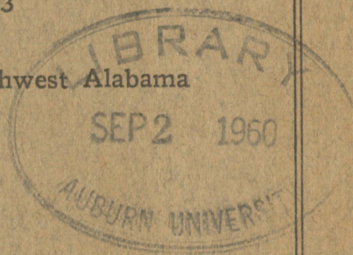
Magnetic Investigations in Southwest Alabama

By

J. BRIAN EBY

and

E. G. NICAR



University, Alabama

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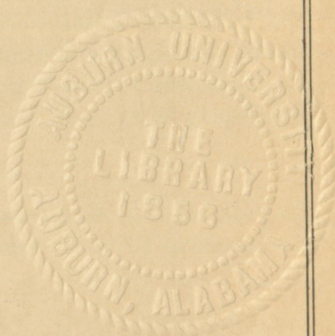
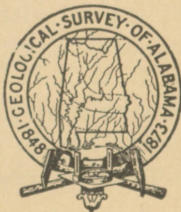
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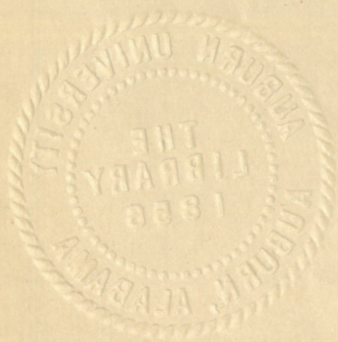
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LETTER OF TRANSMITTAL

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CONNELL

University, Alabama,
June 15, 1936.

Honorable Bibb Graves,
Governor of Alabama,
Montgomery, Alabama.

Sir :—I have the honor to transmit herewith the manuscript of a report on the "Magnetic Investigations in Southwest Alabama," by J. Brian Eby and E. G. Nicar, with the request that it be printed as Bulletin Number 43 of the Geological Survey of Alabama.

Much progress has been made in recent years in locating, by geophysical methods, deep-seated geological structures, which might favor accumulations of salt, oil or gas. These methods have many advantages over the old ways of determining structures by surface outcrops, excavations and wells..

This bulletin is the first publication embodying the results of geophysical prospecting in Alabama. The work was done by magnetometer, the least expensive of the three principal geophysical methods, and it covers only a small part of the state, but it is hoped that it will be the forerunner of more detailed studies in additional areas, which may open up new mining fields. It was made possible by the assistance of the Alabama Power Company and federal relief funds, as stated in the preface, and now gratefully acknowledged.

The authors have had considerable experience in this sort of work in proven oil fields, and their statements may be accepted as authoritative.

Very respectfully,

WALTER B. JONES,
State Geologist.

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PREFACE

For many years, there has been a great interest in that region of Alabama immediately adjacent to the Gulf Coast, from the standpoint of oil and gas possibilities. More recently thoughtful men have visualized the great benefits which would accrue to Alabama through the discovery and utilization of commercial salt deposits for the chemical industry. The Geological Survey of Alabama has not been in position to undertake a geophysical survey because of inadequate appropriations. However, four years ago, an attempt was made to work out a cooperative plan with the New Industries Division of the Alabama Power Company, Theodore Swann, Dr. J. Brian Eby, and Dr. Donald C. Barton, whereby a certain part of Southwest Alabama could be investigated by approved geophysical methods. Unfortunately, this plan could not be put into effect at the time.

With the impetus given to various branches of scientific work through the re-employment program of the Federal Government, a plan was worked out whereby this program was accomplished. It is with deep sincerity that we acknowledge our debt of gratitude to Thomas W. Martin, President of the Alabama Power Company, for financial assistance; to Thad Holt, Director, Alabama Relief Administration, for financial help in the field program; to Governor Bibb Graves of Alabama, for substantial financial aid in completing the field work; to Dr. J. Brian Eby, who gave lavishly of his time; to Theodore Swann, T. D. Johnson, Dr. S. J. Lloyd, and Dr. O. G. Thurlow for their sound advice and wise counsel in the shaping of the plans and in carrying out the program; and finally to Mr. E. G. Nicar, who performed his field work with the utmost accuracy and dispatch. All of the above named gentlemen composed an unofficial but most efficient steering committee. Without their aid and backing, it is certain that this work could not have been done.

It is our hope that the information contained in this report will result in a more thorough understanding of the problems involved in prospecting for useful minerals and materials in the region which it describes. It is likewise hoped that any exploration which may take place as a result of this report, be as honestly and faithfully done as was the task of preparing the information contained herein.

WALTER B. JONES.

APPENDIX

The first part of the report is devoted to a description of the geological features of the study area. It is divided into two main sections: a general description of the area and a detailed description of the study area. The general description includes a map of the study area and a list of the geological features. The detailed description includes a description of the geological features of the study area and a list of the geological features of the study area.

The second part of the report is devoted to a description of the geological features of the study area. It is divided into two main sections: a general description of the area and a detailed description of the study area. The general description includes a map of the study area and a list of the geological features. The detailed description includes a description of the geological features of the study area and a list of the geological features of the study area.

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WALTER H. HARRIS

MAGNETIC INVESTIGATIONS IN SOUTHWEST ALABAMA

by

J. Brian Eby

and

E. G. Nicar

INTRODUCTION

A magnetic survey of a large portion of southwest Alabama was carried out from September 6, 1934 to January 31, 1936. The work was done under the direct supervision of Dr. Walter B. Jones, state geologist, with the senior author as cooperating geologist. The field work was conducted entirely by the junior author and the instrument used was an Askania vertical variometer.

The area covered included all or portions of Mobile, Baldwin, Escambia, Conecuh, Monroe, Choctaw, Washington and Clarke counties, embracing approximately 7,000 square miles. No attempt was made to take magnetic observations in any of the larger water bodies such as Mobile Bay and Mississippi Sound.

The detailed magnetic map attached to this report shows the location of all observation stations for which the data has been checked. A number appears beside each station, which represents, in gammas, the vertical component of magnetic intensity found at that particular location. Starting from a base station at Mobile an assumed 500 gamma value was used and, therefore, all variations from this intensity are indicated by the various observations throughout the area. By joining all points of equal vertical intensity with lines (contours) the areas of high or low intensity and the direction of the various magnetic trends become apparent.

In addition to the geophysical data and for the benefit of comparing directly the effects of the Hatchetigbee anticline and the Jackson fault on the magnetic picture the axes of both these geologic features are shown. All deep wells drilled in the region are indicated, with the company names and total depths.

Before discussing either the purpose or the results of the magnetic survey of this area, it is necessary to give a brief dis-

cussion of the topography and the geology of the region. Following this a general statement of the merits of the magnetometer will be given.

TOPOGRAPHY

The general territory of this report is divided into several physiographic provinces, as indicated by Figure 37, Page 202, Special Report No. 15, Alabama Geological Survey, which outlines and names the various provinces of the state. The low flat featureless Gulf coast plain extends from the general vicinity of Mobile south. North of this coastal plain to the southern border of Choctaw and Monroe counties the topography is featured with low rolling hills covered with piney woods and scrub oak. Choctaw, Clarke and Monroe counties occur in that province designated as the Southern Red Hills and is more rugged with maximum relief of from 250 to 300 feet. The broad delta of the Mobile and Tensas rivers is a feature that can only be covered by boat transportation. It is low, marshy and subject to overflow.

GEOLOGY

The oldest known sedimentary formation in southern Alabama is the Upper Cretaceous, which is divided into four distinct formations, named from younger to older—the Ripley formation, the Selma Chalk, the Eutaw formation and the Tuscaloosa formation. It is presumed that these formations rest on basement crystalline rocks.

The Tertiary of southern Alabama is represented by the Eocene, Oligocene, Miocene and Pliocene. Named from younger to older, the separate formations of the Eocene are the Jackson formation, the Claiborne group, the Wilcox group, and the Midway formation.

The Alabama Oligocene consists of the Vicksburg group. Overlying the Oligocene is the Miocene consisting of the Pascagoula Clay, Hattiesburg Clay and the Catahoula sandstone. The Pliocene-Citronelle formation which consists of red and yellow sands and many-colored clays covers much of the territory embraced in this investigation. Since these sands are cross-bedded and only poorly stratified they serve largely to obscure the geologic features of the territory over which they lie.

The description of these formations is excellently presented by Dr. D. R. Semmes, in his work on Oil and Gas in Alabama, which was published in 1929 as special report 15 of the Alabama Geological Survey.

In this report Dr. Semmes discusses at considerable length the possibilities of salt domes existing near the Gulf coast of Alabama and the possible commercial occurrence of oil and gas in this portion of the state. He points out that there are no true live seepages of oil known in the coastal plain of Alabama. He also points out the difficulty of using surface geology in this region as a help in finding subsurface structure, and recommends the use of geophysical methods.

The more important geophysical methods are the use of reflection or refraction seismographs, the use of the torsion balance or gravimeter and the use of the magnetometer. In determining the best method to use in southern Alabama, the Alabama Geological Survey was compelled to consider not only the technical or practical results but the cost of operation. This latter consideration eliminated all possibility of the use of either seismographs or torsion balances, leaving as its sole geophysical instrument the magnetometer. Before discussing the general outcome of the magnetic investigation, however, it is necessary to give a brief statement as to the use of the magnetometer and its results.

THE MAGNETOMETER

Theoretically, the earth itself is an enormous magnet, having both North and South magnetic poles; the North magnetic pole is familiar to us all, since in a general way the compass needle invariably points toward it. However, there also exists a South magnetic pole, which is subject to the same actions and irregularities as the North magnetic pole, although it has never received so much publicity except possibly among the Chinese and Japanese.

The magnetic flux propagates itself through the earth between these two poles, developing its maximum positive vertical intensity at the North magnetic pole and its maximum negative vertical intensity at the South magnetic pole, but between these two poles there is a leakage of magnetic force over all the distance between the two. Hence, there is a terrestrial magnetic field,

which has both direction and magnitude and is known as the angle of inclination, measurable by the common dip needle. The vertical intensity is one component of this force, the horizontal intensity being the other. The vertical component has been determined the most satisfactory in geophysical research work because it more quickly and accurately records any distortion of the terrestrial field due to anomalous conditions in the earth's crust or shell.

It is assumed that the magnetic force which we measure and of which we have visible evidence, penetrates the earth to a considerable depth, but relative to the diameter of the earth itself, this is only a thin shell. Experiments have shown that even iron and steel loses its magnetic properties upon being heated to a temperature of approximately nine hundred degrees Fahrenheit. The exact temperature of the total loss of susceptibility to magnetism is known as the Curie point, and a simple calculation based on the increasing temperature with depth (which in general is variable) shows roughly the maximum penetration of magnetic flux into the earth.

From the foregoing assumption, we are reasonably sure that from the Curie point up to a certain point below the surface where the basic magma has become cooled, the magnetic forces remain fairly uniform, and from that point to the surface, the petrographic conditions causing variations in the terrestrial field may be divided into three parts, i. e., Basic, Sub-surface and Surface. It is with these three divisions we must work in analyzing the resultant variations recorded by the magnetometer. Of these three, the greatest force exerted emanates from the Basic rocks, whether deeply buried or plunging to the surface in the form of an igneous intrusive. Of the other two divisions, the Surface and Sub-surface alternately give the next greatest force, depending upon the surface geological condition, some formations having, as we well know, properties ranging from a slightly diamagnetic to a highly paramagnetic quality—these are extremely variable but in a limited region can be considered more or less uniform.

On the theoretical assumption (based on numerous experiments and observations) that the earth's field is neither increased nor decreased by inequalities of structure nor by concentration of either diamagnetic or paramagnetic substances (or masses) it can be assumed that it is merely deformed to a certain extent thereby

concentrating the positive or negative force in one area and dispersing it in another, i.e., that for every magnetic high there shall be a magnetic low, or a large surrounding area robbed of its normal intensity or vice versa. Consider this experimental example; placing a sheet of paper over a bar magnet and sprinkling iron filings thereon, we obtained a certain picture of the forces acting on the filings; but, by placing a soft iron cross bar at the end of the magnet, we obtain an entirely different picture although the original force has neither been increased nor decreased, merely realigned.

Frequently no distinct magnetic low is observed in proximity to a positive anomaly or in the opposite distribution no marked magnetic high is outlined in conjunction with a negative anomaly; but under such conditions the entire surrounding region or a great part thereof is proportionally below or above the normal field intensity. The junior writer has both observed and worked out several large areas in different sections of the South and West, keeping in mind this supposition, and invariably the averaged value corresponds to an extremely close approximation of the normal intensity, such approximation determined from United States Coast and Geodetic magnetic observations and from smaller areas in the region of no appreciable variation one way or the other.

It is to be remembered that the vertical variometer (Magnetometer) measures the total magnitude of the vertical component of the earth's magnetic field at any one point and is distinctly not actuated upon solely by some bed or beds of sedimentary origin. These beds do comprise a part of the measured force, but usually an extremely small part, while the total thickness of the sedimentary strata and down into the basement, until the Curie point has been reached, determine the far greater part of observed vertical intensity.

Any determination of subsurface structures, whether they be anticlinal or synclinal folding, salt domes, or faults, must necessarily take into consideration the comparatively enormous force of the deeper rocks, particularly the rocks of high ferric content, which give by far the preponderant distortion of the normal field. Therefore, unless this be eliminated to a great extent, by proper corrections, the picture obtained is entirely out of proportion and consequently useless insofar as its application to petroleum geology is concerned.

A chain of subterranean igneous masses discovered by the junior writer in 1928 in southeast Arkansas, extending across into Sharkey and Yazoo counties, Mississippi, gave large anomalies, ranging from 600 gamma to 2600 gamma relief. Two wells drilled on these plugs encountered the igneous material at approximately 3000 feet, with no indication of structural uplift in the overlying sedimentary formations; and two of these are now gas fields, namely: Epps High, known as the East Carroll Gas field in north Louisiana; and Jackson field at the city of Jackson in Mississippi.

There are numerous magnetic anomalies in northern Mississippi, which the junior writer has personally mapped, and although from five to seven wells have been drilled on the apex or in close proximity to the apex of some of these, no uplift of the Cretaceous was discerned in the drilling. No wells have been drilled on these which penetrated the Paleozoic to any depth, and it is doubtful if any even reached these formations; therefore no conclusions can be drawn as to their relation to the observed anomalies.

Numbers of known anticlinal structures and three salt domes, carefully mapped by the junior writer with an Askania vertical variometer, showed recordable magnetic variation. Records obtained by others, personally inspected and interpreted, also showed irregularities and distortions from the normal field; in fact, this evidence was so overwhelming that the junior writer is of the opinion that all structures of any appreciable uplift (or folding) or faulting will cause some distortion of the normal magnetic picture. However, of all heretofore observed, with the exception of the two producing igneous plugs mentioned before in Louisiana and Mississippi, no structures have shown more than 44 gamma relief, although many range between thirty and forty, but often complicated to some extent by regional disturbance due to deeply buried igneous masses.

The Eocene deposits through the South and Southwest have repeatedly shown themselves to be much more paramagnetic than the Cretaceous formation, and the recent deposits from the Miocene up through the Pleistocene have also considerable susceptibility as compared with these older rocks. Then too, when working over the outcropping of these formations, the balance itself is nearer the center of mass of these strata, and following the principle that the force exerted is directly proportional to the

unit strength of the magnetic field and inversely proportional to the square of the distance apart, it is clearly seen that our variations derived from the sedimentary formations is to a large extent caused by the position, thickness, and mineralogical content of the Eocene and younger formations.

A salt dome is a massive intrusive plug, usually about a mile in diameter and of unknown depth, of slightly diamagnetic properties. Since the magnetic flux seeks the path of least resistance similarly to the flow of electrical current, and the surrounding paramagnetic beds of the Eocene and possibly the Cretaceous offer less resistance to the passage of this force, it is entirely reasonable to assume that the passage will be away from and around the obstruction; hence we obtain negative anomalies immediately over this salt mass, while outside and surrounding this zone we have small positive anomalies, representing the crowding of the lines of force away from the diamagnetic salt, the sum of these being equivalent to the negative zone.

In an opposite manner, a basic igneous intrusive being much more highly susceptible than the surrounding country rock, creates a large positive anomaly with an attendant magnetic low, or occasionally, decreases the adjacent and surrounding area in proportional intensity.

A structural uplift, such as anticlinal folding, is likely to occasion a positive anomaly, provided the overburden of Eocene formations have not been thinned to any appreciable extent. However, if erosion has denuded a considerable thickness of the paramagnetic Eocene beds and the tectonic force occasioned a thinning of the remainder, thereby placing the less susceptible Cretaceous rocks nearer the surface, the anticline will undoubtedly be reflected by a negative change. In the event the area is not subject to magnetic disturbance from the basic rock, this usually assumes the minus thirty to minus fifty closed negative anomaly.

RESULTS OF MAGNETIC INVESTIGATION

Studying the magnetic map of the region as a whole several important features can be noted. Probably the most outstanding are the two prominent positive magnetic anomalies, the one centering in the southwest quarter of Township 2 South, Range 4 East,

several miles southeast of Bay Minette, and the second centering in Township 10 North, Range 3 East, a few miles south of Thomasville. The Bay Minette anomaly has a definite closure of over 100 gammas and a probable closure of 250 gammas. The Thomasville anomaly has a definite closure of 450 gammas and a probable closure of 600 gammas. Both of these positive anomalies can be interpreted as representing deep-seated plugs of igneous rock.

It cannot be determined whether or not these plugs represent residual remnants of an eroded basement floor or actually intruded masses. The Magnolia Petroleum Company drilled a well to 6010 feet near the center of the Thomasville anomaly, finding the Selma Chalk at 1746 feet, the Tuscaloosa at between 3350 and 3422 feet, and entering hard quartzitic sandstone (probably Paleozoic) at 5995 feet. Although there is little data with which to make geological correlations, the impression is that the well is definitely low, indicating that the sedimentary beds overlying this plug have no appreciable uplift. The Bay Minette anomaly was recently drilled to a depth of 5027 feet, and the Selma Chalk was reported at 4550 feet. Here again there is little geologic evidence available to give the relative position of the formations here. From regional considerations, however, it is apparent that the formations are definitely high under this well. About fifty miles to the northwest the Danciger Oil and Refining Company, Avent No. 1, total depth 4865 feet, was drilled in section 25, of Township 5 South, Range West, and found the top of the Selma Chalk at about 4750 feet.

In interpreting the magnetic results it is practically useless to look for or to expect closed minor anomalies on or north of the general axis of the magnetic high extending from Grand Bay in Mobile County easterly to the Bay Minette positive and thence into northwest Florida. The regional changes preclude the possibility of such occurrence. However, in analyzing the region for anomalies indicative of structure in the upper formations it is not necessary to obtain a visible closure without the application of proper regional corrections, as an unusual spreading or flattening of the contours is sufficient to indicate the change in structure.

Since local structures in the Cretaceous and younger formations seldom show more than 40 to 50 gamma abnormality, it is obvious that the petroleum geologist and geophysicist would be more interested in these features than in the larger magnetic anom-

alies showing the position and size of the basement complex. Several such minor anomalies may be seen on the magnetic map in the southern portion of the area. The more important of these anomalies are first; the Fairhope area, immediately south and southeast of the town of Fairhope in Baldwin County; second, the Bayou LaBatre, northwest of the town of Bayou LaBatre in Mobile County, third; the Dog River area, south and southwest from Mobile on Dog River, indicated by abnormal spreading in the contours, fourth; the Mt. Pleasant area, north of Little River, southeast of the Alabama River, west of the town of Uriah, in the southwest part of Monroe County.

The general magnetic picture apparently is not affected by the structure of the Hatchetigbee antcline. Likewise the Jackson fault apparently plays no part in the arrangement of the magnetic contours. From all appearances the magnetic contour pattern suggests the southwestward extension of the buried Appalachian Paleozoics.

From the standpoint of the petroleum geologist in southwest Alabama we may see that this magnetic investigation is successful only insofar as it points out several areas of interest in the southern portion of the area that warrant further and more intensive types of geophysical investigation. It is believed that both the Bay Minette and Thomasville areas will warrant further detailing by reflection seismograph with the idea of attempting to find the structure, if any, of the sedimentary rocks immediately overlying the igneous plugs.

If salt domes occur in southern Alabama it is presumed that their location would be indicated by small negative magnetic anomalies. Several such anomalies have already been pointed out. With reference to oil itself, nothing further can be added to the report of Dr. Semmes (Bulletin No. 15). The magnetometer is valuable only insofar as it sets out areas of especial interest. It can add nothing in itself to our knowledge of the presence or absence of petroleum, which drilling alone can establish. It is hoped that this magnetic investigation will serve the purpose for which it was designed, namely, to bring southwest Alabama to the further attention of the geologist, the geophysicist and in their wake the driller.

THE HISTORY OF THE
CITY OF BOSTON
FROM THE FIRST SETTLEMENT
TO THE PRESENT TIME
IN TWO VOLUMES
BY NATHANIEL BENTLEY
VOL. II.
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WELL LOGS

(Summaries and annotations are by Winnie McGlamery, Paleontologist,
Geological Survey of Alabama.)

Mrs. Mamie S. McCurry, Et Al.	Southern Kraft Corp. No. 1.	Baldwin
Mrs. Mamie S. McCurry, et al.	Southern Kraft Corp. No. 1.	Baldwin
Co., Ala. Loc. Sec. 28-2S4E.	200' & 200'E NWc NE/4SW/4.	Began
June 13, 1935.	Abandoned July 31, 1935.	Elev.: 178' Aneroid. Casing
0-30 clay and sand	1539 hard sandy lime	
90 sand	1581 hard lime	
120 boulder	1600 broken lime with hard streaks	
180 clay and sand	1608 brkn lime	
186 stky clay	1604-10 core 7	
252 blue clay & sd stks	1616 blue shale	
445 blue clay w/Qtz gravel	1648 broken and hard lime	
467 blue clay	1670 sandy shale	
489 blue clay w/Qtz gravel	1692 shale, sandy shale and green	
557 blue clay w/sd & gravel	stky sd.	
671 blue gmy clay	1674-81 core 8	
725 blue sh & sd	1700 sdy sh & shell & had stk sd	
821 blue stky sh	1740 hard sandy shale & shells	
843 blue stky sh w/sd stks	1780 green sdy lime w/shells & sd	
887 blue stky clay	stks	
975 blue stky sh w/gravel	1812 sdy lime with streaks clay	
997 sand, shale & gravel	1780-87 core 9	
1020 blue clay, sd stk w/gravel	1860 greenish gray sdy lime w/gray	
1037 chalk	clay streaks	
1037-39 core 1	1812-15 core 10	
1160 chalk & lime	1836-39 core 11	
1234 gray blue shale	1927 sand & sandy shale	
1258 sand	1860-63 core 12	
1300 black-green shale w/sd streaks	1880-83 core 13	
1264-71 core 2	1904-07 core 14	
1323 sand and sandy shale	1924-27 core 15	
1325 sandy shale	1960 sandy shale and soft streaks	
1327 lime shells	1946-49 core 16	
1347 gummy shale	1981 green sd w/hd streaks	
1327-33 core 3	1969-72 core 17	
1352 hard lime	2154 green sdy sh w/hd stks lime	
1366 lime and shale	1993-96 core 18	
1357-8 core 4	2019-23 core 19	
1378 hard chalk	2034-37 core 20	
1438 chalk and lime	2058-61 core 21	
1378-83 core 5	2074-77 core 22	
1465 hard lime with broken streaks	2100-03 core 23	
1465-70 core 6	2118-21 core 24	
1487 gray sdy sh w/hd stk sd & lime	2129-31 core 25	
1517 broken lime w/hd lime caps	2149-52 core 26	

- | | |
|-------------------------------------|---|
| 2194 brown stky sh. w/stks brittle | 3203 hard sandy lime |
| brown | 3201-3 core 44 |
| 2159-61 core 27 | 3275 hard lime & shells (drilled rough) |
| 2192-95 core 28 | 3215-18 core 45 |
| 2212 stky brown gray shale | 3222-25 core 46 |
| 2115 sandstone | |
| 2378 soft gray brown sdy sh w/stks | 3288 shale & lime |
| brown stky shale | 3293 shale |
| 2215-18 core 29 | 3297 brown sdy shale |
| 2288-91 core 30 | 3295-98 core 47 |
| 2363-66 core 31 | 3401 brown hd sh w/stk stky shale |
| 2430 soft brown sdy sh w/stks brown | 4384 brown shale and sticky shale |
| sticky shale | 3485 hard cap rock |
| 2460 greenish sandy shale | 3488 sand |
| 2430-33 core 32 | 4385-88 core 49 |
| 2457-60 core 33 | 3508 sandy shale |
| 2551 greenish brown sh & brown | 3553 gummy shale |
| sticky sh w/stks shell & sand | 3561 sand |
| 2504-07 core 34 | 3554-57 core 50 |
| 2548-51 core 35 | 3570 stick shale |
| 2561 brown stky sh w/layers shells | 3576 hard lime |
| & gravel | 3581 rock |
| 2637 brown sdy sh w/stks shell | 3580-82 core 51 |
| 2561-64 core 36 | 3585 hd sdy lime & soft sand |
| 2689 brown sdy sh & had brittle | 3727 soft gray brown sdy sh & |
| brown shale | brown sh. |
| 2637-40 core 37 | 3583-88 core 52 (no rec) |
| 2694 salt water sand | 3588-92 core 53 |
| 2691-94 core 38 | 3728 limestone |
| 2722 salt water sand | 3730 hard sand shale |
| 2724 rock | 3735 sand with stk hd sandy sh |
| 2724-26 core 39 | 3731-34 core 54 |
| 2750 salt water sd w/gray sdy shale | 3789 hd sdy sh w/stks shale |
| 2798 shale and sandy shale | 3753-56 core 55 |
| 2829 gray sdy shale and shale | 3804 gummy sh w/stks sdy shale |
| 2799-2802 core 40 | 3880 sandy shale boulders & brown |
| 2875 shale w/stks gray sandy shale | sticky shale |
| 2915 shale w/stk gmy shale | 3839-42 core 56 |
| 2876-79 core 41 | 3876-79 core 57 |
| 2996 gmy sh w/stks hd sh & sdy sh | 3930 gray dark brown stky shale |
| 2917-20 core 42 | 3930 bottom 9-7/8 hole |
| 3050 brown sticky shale | 3950 brownish black stky shale |
| 3050-52 core 43 | hard shale with boulders |
| 3074 stky brown sh w/stk gray sdy | 3946-49 core 58 |
| shale and shells | 3984 brown-black hd sh w/stky |
| 3161 brown stky shale | streaks |
| 3178 brown stky sh w/stks hd sh & | 4054 brown-black sh & black flky sh |
| gummy sh | 4095 black flaky shale |
| 3198 brown sh w/hd lime stks | 4097 hard lime & shale |
| (top Salt Mountain 3198) | 4097-99 core 59 (no rec) |

4101 limestone	4376 gray sand & sandy shale
4243 brownish black stky sh w/stks	4354-57 core 64
sandy shale	4420 gray sandy sh & sd & hd shale
4138-40 core 60	4500 hard shale & sticky shale
4150-53 core 61	4427-30 core 65
4249 sand	4521 sticky sh & streaks sandy shale
4246-49 core 62	4534 sandy shale and sand
4252 cap rock	4568 black flaky shale
4272 sandy shale	4698 hard sticky chalk
4254-57 core 63	4572-75 core 66
4303 hd black shale w/gummy stks	5027 chalk
4350 black shale	T. D.
4354 broken sandstone	

Cores

No.

- 1 1037-39 light whitish blue chalky shale
- 2 1264-1271 greenish black calcareous, pyritiferous lignitic and slightly bentonitic laminated clay with sand streaks, occasional shell frag.
- 3 1327-1333 greenish gray fossiliferous calcareous shale
- 4 1357-58 light olive green slightly calcareous clay
- 5 1378-1383 hard gray white sandy limestone
- 6 1465-1470 gray sandy shale with sand streaks (tastes salty)
- 7 1604-1610 hard sandy lime with blue noncalcareous clay at base
- 8 1674-1681 massive gray fine sandy shale and sand with shell fragments.
- 9 1780-1787 gray sandy lime with gray green fossiliferous sand and sandy clay streaks
- 10 1812-1815 gray sandy glauconitic lime with gray shale streaks.
- 11 1836-1839 hard gray green glauconitic sandy lime with streaks of sandy shale (salty).
- 12 1860-63 gray green sandy lime with streaks of sand and sandy shale partly porous (salty)
- 13 1880-83 fine porous gray green very sandy lime with streaks of sand.
- 14 1904-1907 porous greenish gray sandy lime very sandy.
- 15 1924-1927 greenish gray sandy lime with streaks gray shale and sand
- 16 1946-49 hard green gray sandy lime with streaks sand.
- 17 1969-1972 hard green gray sandy lime with streaks gray micaceous sand.
- 18 1993-1996 hard bluish gray sandy lime
- 19 2019-2023 hard bluish gray sandy lime with sand streaks.
- 20 2034-37 green gray sandy lime like siltstone and streaks gray calcareous clay.
- 21 2058-2061 hard blue green sandy glauconitic lime
- 22 2074-77 hard blue gray glauconitic sandy lime with streaks of white chalk
- 23 2100-2103 hard gray green sandy lime (siltstone with streaks chalk)
- 24 2129-32 green gray very sandy lime slightly glauconitic and fossiliferous (salty)
- 26 2159-2162 gray brown noncalcareous laminated clay slightly sandy
- 27 2178-2181 brown gray laminated clay.
- 28 2192-2195 gray brown micaceous laminated sandy clay slightly calcareous

- 29 2215-2218 dark gray calcareous micaceous sandy chalk slightly fossiliferous
- 30 2288-2291 fine grained gray salt water sand.
- 31 2363-66 gray brown laminated sandy shale.
- 32 2430-33 fine gray green micaceous sand.
- 33 2457-2460 fine gray green slightly glauconitic porous sandy shale (salty)
- 34 2504-2507 fine gray laminated micaceous sandy shale (salty)
- 35 2548-2551 fine gray laminated micaceous slightly sandy shale.
- 36 2561-63 gray laminated micaceous lignitic clay with sand streaks, non-calcareous.
- 37 2637-2640 fine gray micaceous and lignitic shale with streaks of gray sand.
- 38 2691-94 fine grained gray micaceous sand slightly lignitic (tastes salty)
- 39 2724-26 gray laminated micaceous shale with streaks of sand (few fossils)
- 40 2799-2802 fine gray micaceous sandy shale.
- 41 2917-2920 gray laminated slightly micaceous sandy shale.
- 42 2999-3002 gray laminated micaceous sandy shale with streaks coarse glauconitic sand (salty)
- 43 3050-3052 gray laminated micaceous sandy shale with streaks of porous sand.
- 44 3201-3203 hard white sandy glauconitic lime
- 45 3215-3218 hard gray dense lime with white fossiliferous lime nodules.
- 46 3222-3225 hard white lime an streaks gray marl.
- 47 3295-3298 dark gray laminated shale with streaks fine sand with thin lignite seams.
- 48 3398-3401 gray laminated shale with streaks gray micaceous sand and sandy shale with lignitic streaks.
- 49 3485-3488 gray highly fossiliferous sandy shale with streaks of sand.
- 50 3554-57 dark gray shale with streaks medium grained subangular quartz sand and fossils.
- 51 3581-83 soft gray sandy shale.
- 52 3585-88 no record.
- 53 3588-92 fine gray porous quartzitic sand (S. W.)
- 54 3731-34 hard and soft gray porous micaceous sand with streaks of gray sandy shale.
- 55 3753-56 soft gray medium coarse quartzitic sand with streaks dark gray thinly laminated sandy clay (S. W.)
- 56 3839-3842 fine gray laminated micaceous sand with lignite seams and streaks dark gray clay (salty)
- 57 3876-3879 fine gray laminated micaceous sand with streaks dark gray brown shale.
- 58 3946-49 dark gray brown thinly laminated shale with thin streaks of micaceous sand.
- 59 4097-99 (hard quartzitic boulders)
- 60 4138-4140 fine dark gray micaceous sand with streaks fine sandy shale.
- 61 4150-4153 fine tight slightly micaceous sand with streaks dark gray shale and sandy shale.
- 62 4246-49 hard tight quartzitic sand streaks slightly calcareous.
- 63 4254-57 dark gray black poker chip shale with streaks dark gray micaceous sand and sandy shale.

- 64 4354-57 medium coarse gray quartzitic sand very porous (pungent odor)
 65 4427-4430 dark gray black brittle slightly micaceous shale with gummy streaks.
 66 4572-75 whitish gray tight gummy chalk with gray shaley chalk streaks.

Remarks: Interested in this test were the following companies: Danciger Oil & Refining Co.; United Gas Public Service Co.; Sun Oil Company; and the Arkansas Natural Gas.

Summary

Citronelle—0 to 186+—

Miocene—Approximately 186-210 to 1124-47 ft.

Oligocene—between 1124-47 ft. and approximately 1345 ft.

Jackson—between approximately 1345 ft. and 1670 ft.—

Claiborne—between 1674-81 ft. and approx. 2132 ft.

Wilcox—between 2159 ft. and approx. 3449-71 ft.

Midway—between 3485-88 ft. and 4554 ft.

Selma chalk begins between 4554 and 4572 ft. and continues to bottom of hole.—5027 ft.

Danciger Oil & Refineries, Inc. Ft. Morgan No. 1. Baldwin Co., Ala.
 Location: Extreme western end Ft. Morgan Peninsula. Began: Jan. 30, 1935. Abandoned: March 18, 1935. Elev.: 11.4' D. F. Casing record; 32'-19"; 200'-12".

0-32 surface	915 shale
80 soft sand	960 sandy shale and shells
90 soft sand	961 hard sand
110 gumbo	985 sandy shale and shells
173 soft sand	1101 sand and streaks of shale
182 gravel and sand	1103 hard lime shell
191 shells and sand	1194 sandy shale
200 gumbo	1230 sticky shale
280 shale and shells	1293 sandy shale and shells
300 gravel	1307 sandy shale streaks sticky shale
327 gravel, shale and shells	1335 gummy shale and sand streaks
450 shale and shells	1389 sticky shale
457 sand	1390 lime shell
560 blue shale	1398 sticky shale and shells
608 soft sand	1413 soft streaks of sand
611 gravel	1414 hard lime shell
665 sandy shale and shells	1442 sticky shale
710 sandy shale	1444 sand
711 rock	1447 sticky shale
727 shale and boulders	1458 sticky shale and sand streaks
800 soft sand	1470 gumbo
838 sandy shale and shells	1511 sticky shale
852 soft sand and shells	1525 brittle shale with shells
910 sandy shale and shells	1530 gummy shale

1535 shale	2055 sandy shale w/streaks gummy shale
1551 shale with streaks of sand	2095 shale
1557 shale	2135 brittle shale
1570 shale with fine sand	2172 shale
1586 brittle shale	2212 brittle shale
1592 sticky shale	2307 shale
1594 shale and shells	2315 sand
1625 dark green shale with sand streaks	2331 soft, salt and pepper sand
1627 shale & streaks of sandy shale	2333 sand
1638 sandy shale and shells	2334 rock
1708 sandy shale	2352 sand
1726 sandy shale with gummy streaks	2385 salt water sand
1744 sandy brittle shale, shells and streaks hard brown lime	2400 soft, salt water sand & streaks of shale
1762 brittle shale and shells	2442 sandy shale
1780 sandy shale	2457 shale
1855 sandy shale with streaks hard brown lime	2505 sandy shale
1895 sandy shale	2515 sandy shale
1935 shale	2544 broken sand and shale
1975 brittle shale	2564 broken sand and shale
1985 brittle shale	T. D.
1987 sand and shells	Surface to 290 ft. Recent and Citronelle
1993 sandy shale w/shells and lignite	290 ft. to 2564 ft. Miocene
2005 sandy shale	(Cores from 1557' to 2564' carry a
2015 sandy shale with streaks of lime	fauna very close to the Choctawhatchee formation of Florida.)
2035 sticky shale	

C. W. Robinson et al (Johnny Greer). Long Bell Lumber Co. No. 1. SW-SW-SE $\frac{1}{4}$ Sec. 28-10N-4W, Choctaw County, Ala. Elevation: Altimeter 325 ft. Casing record 15 $\frac{1}{2}$ " - 39 ft.; 10" - 321 ft.

0- 18 surface	576- 594 sand
18- 39 blue shale and sand	594- 604 sandy shale
39- 83 sand and shale	604- 626 sand and gravel
85- 120 sand and gravel	626- 646 sandy gravel
160- 200 gray shale and sand	646- 676 hard sand
200- 204 sand	676- 690 gravel and shale
204- 262 sand	690- 692 hard sand rock
262- 270 hard sand	692- 702 sandy shale (cored at 691)
270- 312 hard sand	702- 776 sandy shale
312- 321 hard sand with gravel & shale	776- 778 rock
321- 326 sand, shells and shale	778- 830 gumbo with streaks of sand
326- 464 sand, shells and shale	830- 842 sandy gumbo
464- 508 sand, shells and shale	842- 844 sand rock
508- 546 sand and shale	844- 852 sand and shells
546- 576 sticky shale	852- 883 sticky shale
	883- 888 sand and shale

888-960 sand and shale	1960-1972 gumbo
960-1046 gummy shale	1972-2003 gumbo with streaks of sand
1046-1132 sticky shale with small portions of sand	2003-2010 hard shale
1132-1159 sticky shale and fine sand	2010-2016 sandy shale (2010-2015 cored)
1159-1180 sticky shale	2016-2018 hard rock
1180-1203 sandy gumbo	2018-2038 sand
1203-1233 sandy gumbo	2038-2062 chalk, sand and shale
1233-1234 rock	2062-2069 chalky shale with streaks of brown sand
1234-1262 gumbo	2069-2080 sandy shale
1262-1282 gumbo	2080-2103 gummy shale with hard streaks
1282-1390 gumbo and shale	2103-2135 gummy shale with hard sand streaks
1390-1394 gummy shale	2135-2170 hard gummy shale
1394-1395 gummy shale	2170-2190 hard gummy shale with streaks of sand
1395-1400 ?	2190-2191 hard rock
1400-1401 hard sand rock	2191-2200 gumbo and boulders
1401-1405 sand, white	2200-2217 gumbo and boulders
1405-1411 sandy shale	2217-2220 hard rock
1411-1417 sticky shale with sand	2220-2260 hard shale, black
1417-1432 sticky shale with streaks of sand	2260-2261 hard rock, very rough
1432-1482 tough gumbo	2261-2263 rough rock
1482-1488 gummy shale with boulders	2263-2317 hard black shale and boulders
1488-1563 gummy shale	2317-2343 black shale and boulders with streaks of chalky sand
1563-1568 blue sand rock	2343-2353 gumbo
1568-1570 blue sand rock	2353-2411 shale and boulders
1570-1637 broken streaks of sand & shale	2411-2465 hard black shale with hard black streaks showing a little white.
1637-1641 sand rock	2465-2541 hard shale
1641-1653 broken sand and shale	2541-2566 gummy shale, black
1653-1688 hard and soft green sand with lots of shells	2566-2596 hard shale (corded here)
1688-1690 soft sand	2596-2597 hard, rough rock
1690-1700 sand	2597-2598 sandy shale
1700-1702 sand rock	2598-2634 chalky shale, gummy
1702-1718 shale with shells	2634-2639 soft chalk
1718-1722 hard sand	2639-2683 hard gummy chalk
1722-1763 sandy lime	2683-2746 chalk rock
1763-1798 shale with streaks	2746-2810 chalk, sticky
1798-1818 gumbo, tough	2810-2817 chalky shale
1818-1820-rough, hard rock	
1820-1822 hard rock	
1822-1884 broken sand and shale	
1884-1892 hard sandy shale	
1892-1911 broken sand and shale	
1911-1960 gumbo with streaks of sand	

Steel Line run and hole 20 ft. ahead; correct depth when 2780'3"; this log was corrected back to top of chalk, making first chalk core 2598-2604.

2817-2867 chalk with streaks of shale	3351 hard gummy lime
2867-2896 chalk rock with streaks of shale	3354 hard lime rock
2896-2906 chalk rock with streaks of shale	3574 hard gummy chalk
2906-2962 hard chalk	3603 gummy chalk with shrt brks sdy blue shale
2962-3006 hard chalk rock	3618 broken chalk cored 3618-21
3028 hard chalk with gummy streaks	3624 broken chalk and shale
3067 chalk rock—gummy streaks	3690 hard gummy chalk
3118 broken chalk hard and gummy	3709 broken chalk and shale
3156 hard gummy chalk	3788 hard and soft shale with gummy streaks
3195 tough gummy chalk	3820 hard gummy shale
3200 hard gummy chalk	3821 hard sand cored 3821-27
3205 gummy chalk with tough streaks, cored	3831 green sand and shale
3205-3208 making rat hole from boulders in hole	3850 sandy shale
3206 fishing for bldrs—chalk rock	3851 hard sand
3210 tough gummy chalk	3897 sandy shale gummy streaks cored 3951-57
3225 hard chalk	3963 sdy shale streaks, tough and gummy
3240 chalk rock	4008 sandy shale, gummy streaks
3254 chalky rock gummy streaks	4012 hard sand rock, cored 4012-15
3281 chalky shale hard streaks	4015 missing
3293 gummy lime with hard black shale	4020 hard sand streaks shales, cored 4015-20 6¼" hole from 4012-4020—T. D.
3301 hard broken lime with gummy places	

Douglas Oil Co., No. 1. Robinson & Greer Log. Choctaw County, Alabama. Casing record: 10" - 319 ft.; 8¼" - 2049 (corrected to 2060). Location: Section 15-9N-2W. Elevation: 87.7 (Gulf). Commenced: 8-8-1929. Completed: 10-20-29 (dry and abandoned.)

0 to 12 surface sand and clay	370 sand rock
25 blue mire and gravel	371 hard sand rock
65 blue mire	372 hard rock
100 shale and gravel	373 hard sand rock
157 hard sand	374 blue water sand
167 hard sand	375 rock (cored)
237 gummy shale	376 hard sand rock
267 shale and gravel	397 blue sand
273 (copy report book does not show)	407 gumbo
281 hard blue rock	461 sand and shale
283 gumbo and gravel	468 lignite and shale
305 hard gumbo	469 sand rock
319 hard gumbo	500 lignitic shale (cored 469-476)
356 tough gumbo	501 rock
368 gumbo	505 sand (cored)
	506 sand rock

507 hard rock	1820 hard sandy shale and boulders (cored 1766-73)
511 sand (water sand) (cored)	1920 hard shale and boulders
512 sand rock	2036 hard shale and boulders
535 lignite and shale	2042 gummy lime
592 sand and shale (cored 535-539)	2046 sandy shale (cored 2042-48)
602 tough lime (cored 585-592)	CONTACT: Last 2 ft., SELMA CHALK)
621 sandy shale	2064 hard gummy chalk
622 hard rock	2096 hard gummy chalk
710 gummy shale, streaks of sand	2146 hard gummy chalk
730 gumbo, tough	2209 hard gummy chalk
826 hard gummy shale (cored 730-35)	2245 hard gummy chalk
874 hard gummy shale	2265 hard gummy chalk
886 firm gray sand	2295 hard gummy chalk
912 gummy shale (cored 874-881)	2309 hard gummy chalk
926 gumbo and boulders	2340 hard gummy chalk
960 gumbo and boulders	2380 hard gummy chalk
992 sandy shale (cored 960-67)	2442 broken chalk, streaks hard black shale (cored 2414-2418)
1030 shale, streaks sand (cored 992-99)	2505 chalk with streaks gray shale
1036 gummy shale	2525 hard gummy chalk
1084 gray gummy shale with thin breaks of sand (cored 1080-1091)	2535 gummy chalk
1108 gray gummy shale, streaks of sand	2628 chalk rock, hard gummy streaks run steel line to bottom 8" casing.
1118 green salt and pepper sand with lime (cored 1108-1114)	2726 chalk rock with hard gummy streaks
1206 broken lime and hard sand (cored 1180-1187)	2792 gummy chalk
1215 sand	2825 gummy chalk
1250 gummy shale	2829 broken chalk (cored 2829-2834)
1252 hard sandy lime	2910 chalk rock, streaks hard boulders.
1263 sand and shale (cored 1251-1258)	2925 chalk rock, streaks hard boulders.
1307 sandy shale	2964 hard chalk
1326 gumbo and pyrites boulders	3028 chalk rock
1392 gummy shale, streaks sandy shale	3032 chalk rock
1497 gummy shale, streaks sandy shale	3062 broken chalk, streaks gummy shale (cored 3032-3039)
1498 hard sandy lime rock	3094 chalk, streaks gummy blue shale
1499 hard sand rock	3100 hard chalk rock
1617 gray sandy shale, streaks of sand (cored 1499-1503)	3105 hard chalk
(cored 1577-84)	3159 hard chalky shale & boulders, gummy streaks
1764 gray sandy shale, streaks hard sand	3167 gray shale
1766 hard salt and papper sand	3169 sand, salty

- 3173 cored green sand, streaks lime
(CONTACT: Eutaw 3170 ft.)
- 3201 green salt water sand (cored)
reduced hole 3169' from 7%
to 6¼")
- 3229 green salt water sand (cored)
- 3246 green salt water sand
- 3249 hard sand (did not catch any
of it)
- 3279 green sand, hard streaks gray
sand.
- 3301 green sand, hard streaks gray
sand (no core)
- 3309 green sand and gray shale
- 3330 gray and green sand with shale
- 3353 gray sand, thin streaks shale
- 3375 hard sand streaks shale
- 3389 hard sand streaks shale
- 3400 hard sand streaks shale
- 3408 sand and shale
- 3410 hard blue sand
- 3412 rock, thin streaks sand and lime
- 3436 green sand
- 3446 hard green sand
- 3456 green sand and shale
- 3466 gray sand
- 3470 green shale, salt and pepper
sand.
- 3490 green sand and gummy shale
- 3504 hard sand streaks, gummy shale
- 3506 hard sand rock
- 3512 green salt and pepper sand
(cored)
- 3535 green sand, streaks hard shale
- 3545 tough gummy shale
- 3579 broken sandy lime, gummy
streaks
- 3611 broken lime and hard shale
- 3636 broken lime and hard sand
- 3657 broken lime, streaks hard sandy
shale
- 3683 hard and soft sand, streaks of
lime
- 3713 broken lime and shale, streaks
of sand
- 3724 broken chalk & shale, streaks
of sand
- 3726 hard rock
- 3728 sand and salt (cored 3728-3740)
- 3741 sand with hard streaks
- 3743 tough red gumbo or red bed
- 3768 red gumbo and red shale
- 3795 red gumbo with streaks of shale
- 3821 hard red bed with gummy shale
- 3823 hard sand
- 3833 hard white sand (cored 3823-
3827)
- 3854 red shale with gummy streaks.
- 3859 red gumbo
- 3870 hard gummy lime
- 3888 hard sandy shale
- 3893 hard sandy lime
- 3911 hard sandy black shale
- 3917 gummy lime
- 3948 shale
- 3963 shale
- 3976 tough gummy red bed
- 4028 hard red bed

Magnolia Petroleum Co.

Scotch Lumber Co. No. 1. Clarke Co., Ala.
Location: Sec. 17-10N-3E 250'N & 310'E of SWc NE/4. Began June 15,
1934. Completed August 15, 1934. Casing record: 13" at 253'. Elev.: 354'
alt. (groun)

- 0-10 clay and red sand
- 30 lime and streaks sd.
- 55 lime and green sd.
- 189 sdy. shale & bldrs.
- 205 sdy. shale sd. & bldrs.
- 206 rock
- 253 sticky shale and shells
- 266 sticky shale
- 267 rock
- 305 sand & bldrs.
- 372 sd. shells & strks shale
- 381 broken lime
- 394 limerock
- 440 sand, lignite & strks shells
- 442 rock
- 528 shale & shells
- 568 brown & gray shale
- 573 broken shale & bldrs.

704 gray shale	2550 chalky shale
727 gray shale & Bldrs.	2600 chalky shale w/strks. lime & shells
738 gray & brown lignitic shale	2604 hard chalk
851 gray & brown shale	2646 broken chalk
886 gray shale	2648 hard sdy. lime
895 sticky shale	2660 chalky shale w/strks lime
896 shell	2672 hard chalk
920 broken lime	2676 chalk & shale
970 green sand—shells & shale	2678 hard chalky lime
1009 green & gray sd. & shells	2694 chalky shale w/strks. chalk
1011 rock	2716 broken chalk
1060 shale—gummy strks.	2718 gummy chalky shale
1150 shale, shells, strks, sd.	2721 hard sdy. lime
1195 gray shale & sand	2722 sdy. shale showing trace of oil
1212 broken sdy. shale	2750 gummy shale w/strks. lime
1233 gray sd. w/strks. brown shale (cored 1212 to 1220)	2758 broken limy chalk & sticky shale
1238 sticky shale	2774 broken sdy. lime, shells & green gummy shale.
1260 sd. and strks shale	2794 hard sdy. lime
1329 shale & bldrs. w/strks. sdy. shale	2806 gummy shale strks. sandy lime
1343 shale, black	2823 shale w/sticky strks.
1345 rock	2830 sandy lime (cored 23-24)
1351 shale & bldrs.	2831 lime cap rock
1390 black shale & bldrs.	2833 green sand, S W
1430 shale—gummy shale	2873 green sand and sandy shale
1480 shale bldrs., strks. shell	2938 sandy shale w/strks sand
1500 black shale	2960 green sand (cored 38-41)
1520 gummy shale	2990 sandy shale and soft shale
1525 hard black shale	3018 shale
1527 rock	3023 sandy shale and sand
1539 shale & bldrs.	3050 shale w/sticky streaks
1546 shale w/strks. sand	3070 sandy shale
1549 sand & pyrites	3100 shale w/sticky streaks
1550 rock	3106 hard green sand. S/W (cored 02-05)
1604 black shale, bldrs. & shell	3215 sand, sdy. shale w/strks. shale
1616 broken shell, shale & bldrs.	3223 streaks of sticky shale & strks. sand
1676 sticky shale w/strks gray sdy. shale	3250 streaks of sticky shale and sdy. shale
1687 broken green limestone & shale	3275 shale w/streaks sticky
1708 chalky shale	3298 brown shale w/strks. blue shale
1746 chalky shale strks. chalk	3328 shale
1790 gmy. chalk w/hd. strks	3340 sandy shale
2292 chalk	3346 gummy shale
2316 hard chalky lime	3350 soft gray sand (cored 48-50)
2441 chalk	3403 soft gray sand
2467 chalk w/hd. & stky. streaks	
2497 chalky sh. w/strks. chalk & broken lime and shells.	

- 3422 red and gray micaceous shale
 3430 gray water sand (cored)
 3440 hard red sandy shale
 2461 sandy shale & sticky shale
 3496 red shale w/strks. sand
 3500 sand (cored)
 3522 sand and streaks red shale
 3525 red shale strks. gummy sand
 (core)
 3532 red shale strks. of sand (cored)
 sd
 3535 red sdy. shale strks. gray &
 green
 3541 gray and green sdy. shale
 3548 red & gray shale
 3550 coarse gray sand (cored)
 3582 red & gray shale w/strks. sand
 3584 mucky gray sand (cored)
 3604 red shale & sandy shale
 3607 mucky gray sand (cored)
 3628 sand
 3631 red sticky shale
 3634 coarse gray sand (cored)
 3654 sand & streaks of shale
 3656 gray sticky shale and sand
 (core)
 3669 sticky shale
 3678 coarse gray sand (cored 69-72)
 3712 gray sand w/streaks shale
 3742 hard gummy red shale
 3756 blue & red shale (cored 42-44
 & 54-56)
 3779 hard sticky red shale
 3781 gray mucky sand (cored)
 3803 sand & mucky sandy shale
 3825 sand streaks red shale (cored
 22-25)
 3855 sandy shale w/hd. strks. sand
 3865 red shale, gummy & hard strks.
 3871 red & blue shale (cored 65-67)
 3890 hd. blue sdy. & sticky shale
 3893 gray sd. & mucky sdy. shale
 (core)
 3902 broken sand & mucky shale
 3906 hard dark brown shale
 3909 sd. & hd. shale (cored)
 3918 hd. shale w/strks. sd. & sticky
 sh.
 3940 hd. shale w/strks. sd. & gmy.
 strks.
 3952 hd. shale w/gmy streaks
 3958 broken sd. & shale
 3976 gmy blue shale (cored 58-60)
 3985 sticky shale & sdy shale
 3988 gray sand & sdy shale (cored)
 4017 sand sdy shale & stky. shale
 4020 gray mucky sandy shale
 w/streaks hd. black shale
 4030 gray shale
 4033 sand, gray (cored)
 4040 gray sand w/strks. brown shale
 4070 brown shale streaks red shale
 4080 gummy shale
 4084 hd. sdy limerock (cored 81-82)
 4094 micaceous sandy black shale
 (core)
 4095 hard calc. sandrock (cored)
 4099 rock streaks hard shale
 4101 hard stky black shale (cored)
 4123 hard stky black shale
 4125 sdy shale w/strks shale (cored)
 4130 black shale streaks sdy shale
 4136 hard black shale
 4139 black shale streaks hard sand
 (core)
 4155 black shale streaks hard sand
 4186 hd. black shale w/gmy streaks
 4188 sand (cored)
 4191 hd. sdy. shale & hd. black sh.
 (core)
 4202 hd. shale w/sdy. streaks
 4207 black shale
 4216 hard & soft green sd. (cored
 4208-11)
 4219 gray and green sdy. shale
 (core)
 4242 sdy shale & streaks sand
 4268 hard shale & sandy shale
 4274 sdy. shale strks. hd. sand
 4296 sdy shale
 4302 soft gray sand (cored)
 4350 soft sand streaks shale
 4370 sandy shale
 4375 shale
 4384 gray & green sand (cored
 76-78)
 4398 sdy shale w/gummy streaks
 4406 gray coarse sand (cored 98-
 4400)
 4414 sand & sdy shale

- | | |
|---|--|
| 4465 soft sand streaks shale | 5278 red sdy. sh. & strks shale |
| 4475 hd shale streaks lignite | 5280 hard gummy shale |
| 4490 hard shale | 5305 red sdy. shale & shale |
| 4520 sand strks. lignite (cored 92-94) | 5310 red sandy shale |
| 4536 sdy. shale gummy streaks | 5329 red gummy shale |
| 4540 sand (cored) | 5351 red gummy hard sh. strks sdy. shale |
| 4556 sand, sdy. shale & lignite | 5372 red gummy shale |
| 4572 hd. gray shale w/strks sand | 5381 red sand |
| 4601 hd. shale w/strks sand | 5418 red gummy sh. strks. sdy. shale |
| 4620 red sticky shale (4 cores no recovery) | 5431 red stky sh. & sdy. shale |
| 4626 hd. shale | 5440 red sand |
| 4640 blue & red sticky shale | 5449 red sand & shale |
| 4684 red gummy shale (cored 46-48) | 5477 sdy. shale & strks shale |
| 4669 hard red shale (cored 52-55) | 5485 red gummy shale |
| 4689 gray sand streaks blue shale | 5517 red gummy shale |
| 4697 red shale w/hd streaks | 5580 red sdy. sh. hd. strks of sand |
| 4708 hard shale | 5592 red sd. w/strks. red shale |
| 4711 gray sdy. sh. strks. sd. & sh. (cored 09-11) | 5597 red sdy. shale |
| 4729 red & pink shale (cd. 27-29) | 5599 red micaceous shale |
| 4752 hard red shale | 5621 red shale & gummy streaks |
| 4755 cored gray sand | 5644 red shale strks of sdy. shale |
| 4775 sand w/strks ash | 5672 sh. w/strks of sand |
| 4786 red shale w/strks of sand | 5678 hd. red sh. w/strks sand |
| 4808 hard red shale | 5701 hd. red gmy sh. & sdy shale |
| 4821 micaceous gray sand (cored 4809-12) | 5711 hd. red shale |
| 4834 gray sticky sand | 5722 red sh. w/strks of sand |
| 4862 mucky sdy. shale & sand | 5728 red sh. with gummy streaks |
| 4918 soft sd. red & blue shale | 5745 hd. gmy red shale |
| 4950 hard black sh. strks. sdy. sh. | 5752 sand |
| 4970 hd. red sh. (cored 51-54) | 5755 red sandy shale |
| 4999 soft mucky sd. w/strks gray & pink shale | 5773 red shale w/gummy streaks |
| 5048 soft sd. w/strks red & blue gmy sh. | 5778 gummy red shale |
| 5051 red shale w/strks. blue sh. (cored) | 5814 hd. red sh. w/gmy streaks |
| 5072 red shale—sticky | 5817 red sand |
| 5077 red sand & sdy. shale | 5839 red sand w/streaks shale |
| 5085 red sand & shale | 5844 red sand |
| 5133 red sdy. shale w/hard streaks | 5850 sand & shale |
| 5138 red gummy shale | 5858 soft sticky shale |
| 5154 red gummy shale w/strks sand | 5880 soft shale w/streaks sand |
| 5195 red sh. & red sdy. shale | 5955 red sh. w/gummy streaks |
| 5240 red sh. strks. of black & brown shale | 5988 red gummy sh. w/streaks hard shale |
| 5267 soft mucky sd. w/strks red gummy and sandy shale | 5990 hard sandy limerock |
| | 6010 hard coarse sand with quartzitic pebbles. |
| | T. D. |

Summary

205-53.....to 881-904—Wilcox.
 904-26.....to 1637-59—Midway.
 1681-1703.....to 1725-47—Ripley ?—Cretaceous.
 1746-54.....to approximately 2800—Selma chalk.
 2800 ft.....to about 3350 ft.—Eutaw.

Between 3350 and 3422 ft. to 5995-98—Tuscaloosa.
 (red beds of Tuscaloosa appear at 3422 ft.)

Special Scout Service (Robert L. Steffey, Jackson, Miss.) Hobson-Boykin Well Log. Ramsey Petroleum Corporation. Hobson-Boykin No. 1. Clarke County, Alabama. Location: Sec. 33-6N-2E. Check: 306'N & 484'W of Sec NE. SE. Began: April 18, 1932. Completed: June 30, 1932. Elevation: 67.4' (Top Rotary) (FN 386). Casing Record: 30' - 20" surface casing; 337' of 12½" casing.

0-16 surface sand	1487 core 2" recovery micaceous sandy shale
94 lime	1540 glauconitic gray sand
104 sandy lime	1541 lime shell
130 sand and gravel	1559 glauconitic gray sand
146 shale	1565 core 1' recovery micaceous sandy shale
150 lime	1580 gray shale
168 broken lime with shale	1588 sand
172 shale	1619 sand and shale
191 broken sandy lime with shale	1621 hard lime shell
192 lime	1625 shale and sand
205 gray sand	1635 sand
339 gray lime	1655 gray shale
457 black shale	1670 very hard quartzitic sandstone
459 lime	1692 dark shale and top of Tuscaloosa
681 black shale	1715 dark shale and pebbles
682 lime	1738 white coarse sand
719 shale, black	1770 red beds
721 lime	1792 white coarse sand, some hed beds
760 shale and shell	1799 core 2½' recovery, red beds bentonite & mottled (green, brown yellow, red) shale
764 limestone	1827 red bed
801 black shale	1864 coarse grained sand
810 core 2' recovery, top hard chalk, base gummy chalk determined as Selma. Drill Stem test 801 to 52 open 30 minutes dry test.	1870 core missed, cut like sand
1340 Selma chalk	1876 core missed, cut like sand
1424 black shale	Drill stem test 1832 to 76, seat
1448 black sandy shale	
1480 gray greenish shale	

gave away and tool leaked, therefore, no test.	2688 gray shale, streaks of lignite and sand
1902 sand	2709 gray sand
1912 gumbo	2727 gray shale
1913 lime and shell	2760 gray shale, large amount pyrites, conglomerate iron stone & some lignite
1921 sand, volcanic ash and lignite	2829 coarse-grained sand
1925 gummy shale	2863 gray shale & sand
1932 sand	2900 coarse-grained sand
1933 shell	2962 red beds, few thin streaks of sand
1948 sand, few hard streaks	2963 core 3" recovery hard quartzitic sand cored with 6" basket to recover junk in hole
1961 gummy shale, streaks of sand	2972 blue and red shale
1962 shell	2989 calcareous, glauconitic coarse sand
1965 gummy shale	3003 red beds
1973 sand, streaks of shale	3033 hard gray sand
1974 shell	3050 red beds
1995 sand, streaks of shale in bento- nite	3151 coarse-grained sand
2026 mottled shale, bentonite ash & sand	3175 brownish red shale
2071 sand	3328 white coarse sand
2074 hard sand rock	3338 sand & red shale
2100 sand, some bentonite & mottled shale	3370 hard white sand
2165 bentonitic shale	3436 reddish brown shale
2198 sand	3469 white coarse sand, S.L.M.-3485
2312 bentonitic shale, some lignite	3575 coarse white sand
2423 gray shale, some bentonite & lignite	3688 reddish-brown shale
2471 blue shale	3719 reddish-brown & blue shale
2472 lime shell	3743 white sand
2483 fine grained glauconitic sand	3753 reddish brown shale
2484 lime shell	3868 white sand
2486 sandy shale	3876 very hard sand
2508 blue shale, streaks of fine grained-glauconitic sand	3926 reddish-brown shale
2509 lime shell	3952 white sand
2524 blue shale streaks of fine- grained glauconitic sand	4031 reddish-brown shale, streaks of white sand
2563 blue and gray shale	4120 mottled shale
2564 very hard rock	4123 sandstone
2566 core, no recovery cut out roller core head	4237 coarse white sand
2568 lime rock	4440 coarse white sand, some red, gray, brown, shale in cutting due to caving.
2630 blue-gray shale	4455 core 2' recovery, 1' of red sand and 1' of mottled sandy lime showing 46° dip core cut hard and soft streaks
2640 shale, streaks of sand	
2657 coarse-grained glauconitic sand	
2673 core 3" recovery micaceous glauconitic lignite fine grained sand, not enough recovery to note true character of sand	

4533 sand T. D. (Hole abandoned due to caving).	2000 ft. off 3°
	2250 ft. off 5°
Straight hole tests 500 ft. off 3°	2500 ft. off 5°
1000 ft. off 3°	3000 ft. off 10°
1500 ft. off 3°	3500 ft. off 14°

REMARKS: The above log was assembled from the cuttings which were saved each 20 feet and the manner in which the various formations drilled. It is impossible to know the true character of sands encountered as to their porosity or content, because of lack of cores, and the failure to recover what few were taken.

The various interests in this test and acreage were distributed as follows:

Ramsey Petroleum Corporation.....	: One-half interest
Tidal Oil Company.....	: One-fourth interest
George Monahan	: One-eighth interest
Danciger Oil & Refining Co.....	: One-eighth interest
	(FN 386)

0- 100+—Mariana
 110- 200+—Jackson
 Cut Jackson fault at 220 ft.
 220- 249—Probably Wilcox
 249- 339—Salt Mountain Limestone
 Well started in the Marianna
 Cut Jackson Fault at 220'
 Top Selma chalk 801'
 Top Eutaw 1340'
 Top Tuscaloosa 1692' and continued to bottom of hole.
 339- 801—Midway
 801-1478—Selma Chalk
 1478-1738—Eutaw
 1738-4487—Tuscaloosa. Total depth.

Mississippi Well Log Service (Robert L. Steffey, Jackson, Miss). Ohio's Bethel Log. Ohio Oil Company's. James Bethel No. 1. Mobile County, Alabama. Check: 330's & 330'E of NWc SW/4 NE/4. Location: Sec. 34-3S-2W. Began: June 24, 1932. Abandoned: August 15, 1932. Elevation: 100' (Approx.) Casing record: 18 $\frac{5}{8}$ "-62.5'; 13 $\frac{3}{8}$ "-775'; 9 $\frac{5}{8}$ "-3247'. (FN 3 9 5)

0-10 sand	780 shale, shells
45 yellow clay	791 blue, gray org. sdh. (c)*
62 sand, gravel	900 soft shale
212 sand, gumbo	915 water sand
272 water sand	928 shells, sand
620 gray sand	1085 shale, sand
680 sand, gravel	1111 blue gray mic. sd (c)
771 sand	1356 fossils, sand, shells

*(C) indicates cores

1385 sand, gravel	2991 hard glauconitic sand and clay
1416 sand, gravel	3002 SLM (which balances crooked hole)
1446 lignite, shale, shells	3040 sandy shale
1570 shale, shells, sand	3050 soft sand, shells, (c)
1630 gravel, sand	shaly sand w/quartzite
1740 shale, shells, gravel	3245 sandy shale
1752 shale, shells, gravel (core-sand, limy)	3338 shale, thin rocks, dark shale w/fine sand (c)
1777 lime	3537 shale, thin rocks
1787 broken lime	3540 glauconitic marl
1809 fossils, shells, shale	3555 shaly sand & shale (c)
2008 gumbo, boulders (core)	3650 shale, thin sand laminae (core)
2016 gumbo, boulders (2016-2022 core)	dark sandy shale
2083 chalky lime	3819 shale, thin rocks gummy shale
2088 chalky lime, shells (c)	3828 calcitized sand, green, yellow (core)
2155 lime	3833 hard sandy lime
2167 greenish, calc. clay (c)	3883 hard lime rock
2198 limey shale, shells	3998 sandy shale
2233 lime, green shale	4015 hard green glauconitic marly sand gummy shale (c)
2236 lime, shale (core)	4285 sandy shale, thin rocks
2249 glauconitic, marly earth (core)	4298 light & dark gray shaly sand, lignitic (core)
2275 lime, shale	4530 sandy shale
2300 rotten shale	4545 banded light & dark shaly fine-grained sand (core)
2306 rotten shale (core)	4781 fine-grained shale said & thin rocks (core)
2319 glauconitic marl (c)	4795 banded dark greenish gray to black shale w/few sand lenses (core)
2327 shale, shells, glauc.	4980 gray to black shale
2339 Midly glauc. marl (c)	5070 dark steel gray shale
2418 shale, strks. lime	5083 dark steel gray shale (c)
2443 lime, strks. shale	5275 dark steel gray shale (core)
2445 hard lime	5351 gray, slickensided & brecciated chalk (cored continuously)
2460 salt water sand (c)	5351 T. D. (corrected for crooked hole)
2465 lime	
2496 shale, hard strks. lime	
2534 sandy lime	
2548 glauconite, shale	
2655 glauconite, shale	
2690 shale; glauconite (c)	
2807 shale; fine sand (c)	
2829 glauconitic sand in boring in lignitic shaly sand (c)	
2928 rotten shale, little fine sand	
2980 sand, shale	

(FN 3 9 5)

(c)* indicates cores

Danciger Oil & Refining Co. R. C. Avant & Son No. 1. Washington Co., Ala. Location Sec. 25—5 N—4 W. 281' N 75° W of center of NE/4 SW/4 of Section 25. Began Nov. 2, 1933. Abandoned Jan. 19, 1934. Elevation 248' Bar. Casing record: 20"-57'7½"; 12½"-960'1";

0-24 surface sand	671-672 hard gray sand
28 surface clay	721 green shale & sand
73 sandy clay	823 gray sand (soft)
97 sandy clay	825 gray lime
110 sand and gravel	828 green shale
175 sandy shale	829 lime
178 lignite	834 hard lime rock
195 water sand	855 blue shale & lime shells
203 sticky shale	920 sandy shale & lime shells
238 sticky shale (yellow)	935 tough sticky shale (corrected steel line measurement 963')
246 sandy shale (blue)	1043 sticky shale blue
260 sticky shale (blue)	1058 sandy shale
268 shale (blue)	1075 sticky shale
276 sand (gray) core No. 1	1090 sticky shale blue
268'-288' 1' recovery light gray sand and gumbo	1161 gray shale & lime shells
344 broken shale	1162 hard lime gray
349 sticky shale (blue & red) core No. 2 348'-366', 18" recovery at top light green tough gumbo	1225 soft gray sand
370 sticky shale (blue & gray, greenish)	1256 blue sticky shale & shells (correction)
403 sandy shale (light green)	1260 green sticky shale
409 sticky shale	1263 sandy lime
421 broken sand & shale	1275 sandy shale & shells (core No. 6 1263'-1269' 6' recovery)
461 sandy shale	1337 sticky shale (slight gas odor)?
474 tough sticky shale	1364 blue sticky shale
515 shale with streaks of sand	1432 sandy shale & shells blue & gray
544 sticky shale with streaks of sand (light green) core No. 3 4' recovery 537'-553'	1466 blue sticky shale
562 sandy shale (light green)	1540 blue sticky shale
590 shale with shells (blue & green) core No. 4 570'-590' 5' recovery limy sand & shale with fossils	1570 gray shale & shells
625 sand, shale & lime with shells (hard)	1627 gray shale & shells
641 hard sandy shale lime shells	1642 blue sticky shale
642 hard lime (white)	1671 blue sandy shale
668 sticky shale & shells (blue)	1694 gray sandy shale & lime shells strks.
671 very hard lime with shells	1724 blue sticky shale & streaks shells
672-710 very hard lime, black shale broken over 2' (No. 5 prepare to core?)	1740 gray & brown hard shale
	1744 gray hard sandy lime
	1750 hard lime & sandy shale (core No. 7 1744'-1750' 6' recovery very hard lime at top then hard sandy shale)
	1763 blue sandy shale
	1800 gray sandy shale

1801 gray lime shells	2979 hard gray shale
1839 blue sticky shale	2981 hard lime, shells, gray
1896 blue sticky shale	2990 brown shale
1964 sticky shale & shells	2992 gray lime, shells
1987 blue sticky shale & shells	2994 gray & green shale (corrected S. L. M. 3014' 7")
2003 sandy shale	3018 sticky shale, sandy shale streaks (core No. 10, 3014' 7"-3020' 5' 5" recovery, top sandy shale, hard, containing mica, pyrite & fossil shells)
2101 shale sticky streaks	3048 hard shale with sticky streaks
2120 blue sticky shale	3148 hard brown & sticky shale
2123 very hard lime	3162 sticky shale
2158 gray sandy shale	3243 tough brown sticky shale
(Core No. 8 2123'-2129' 6' recovery dark gray to dark green shale sand with mica, some fossils.)	3246 gray lime
2160 very hard sandy lime	3251 sticky shale
2165 very hard lime, sandy micaceous quartzitic	3352 greenish gray sticky shale
2166 brown sticky shale, sandy	3420 brown & green sticky shale
2177 dark gray sand and shale (core No. 9-2166'-2177' 1' recovery dark gray sand & shale with hard sandy lime at bottom)	3432 greenish gray sticky shale
2180 hard sandy lime	3434 hard gray lime
2200 gray sandy shale	3437 hard brownish green sandy shale (core No. 12 - 3437'- 3439' 2' recovery)
2247 green sticky shale	3439 bluish green hard sandy shale with mica, few fossils
2266 green sticky shale	3451 bluish green hard sandy shale with mica, few fossils, (core No. 13 3454' - 3457' 3' recovery)
2269 hard gray sandy lime	3462 hard to soft sandy shale, bluish gray
2276 gray sticky shale	3480 blue sandy shale (core No. 14 3480'-83' 3' recovery)
2340 green sticky shale	3483 hard gray sandy shale
2347 blue & green sticky shale	3523 gray sandy shale
2357 gray shale & shells	3549 sandy shale & shells gray & green
2358 very hard gray lime	3551 hard lime very hard
2383 green shale	3553 hard lime very hard (core No. 15 3555' - 58')
2417 brown sandy shale	3603 shale—blue & gray with sticky streaks
2440 gray shale	3654 hard shale with sticky streaks
2456 gray sticky shale	3659 hard shale with sticky streaks
2457 very hard gray lime	3660 lime—shells
2477 green sticky shale	3684 sticky shale blue
2478 very hard gray lime	3685 lime shells
2520 blue sticky shale	3717 shale with sticky streaks, green & blue
2521 very hard gray lime	3729 sticky shale—green
2588 very sticky bluish shale	
2616 gray sticky shale	
2680 gray sticky shale	
2766 gray sticky shale	
2757 lime shells	
2769 gray sticky shale	
2789 gray sticky shale	
2859 gray sticky shale	
2971 hard shale with sticky streaks gray & brown	

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|---|---|
| 3730 lime shells | 4341 hard shale gray |
| 3744 sand gray (core No. 16 - 3730'-33') | 4362 sticky shale very tough |
| 3771 sandy shale, gray & black | 4378 hard shale with sticky streaks, brown |
| 3776 lignite—black (core No. 17-3771'-74') | 4380 hard lime gray |
| 3781 sand gray (core No. 18—3778-81') | 4416 hard brown shale corrected S. L. M. to 4411' |
| 3784 sand gray | 4427 hard shale sticky streaks gray (core No. 27—4411-14) |
| 3817 shale brown | 4429 hard lime gray |
| 3819 lime hard gray | 4451 sticky shale with little fine sand gray to green (core No. 28 4429-32) |
| 3828 sticky shale brown | 4474 sticky shale grayish green (core No. 29—4456-58) |
| 3835 sticky shale & thin streaks of sand brown (core No. 19-3829'-31½') | 4477 very hard sandy limestone-greenish gray |
| 3841 sandy shale brown | 4470 hard shale brown |
| 3844 lime rock very hard gray | 4524 hard shale brown & gray |
| 3848 sandy gray (core no. 20—3845'-48') | 4525 hard sandy lime gray |
| 3887 sandy shale, sand with streaks sticky of shale green and gray | 4527 hard sandy lime gray (Witness S. L. M. 1-6-34 affidavits) |
| 3936 sticky shale green | 4531 hard shale brown |
| 3940 sandy shale green | 4573 sticky shale brown |
| 3942 sandy shale, greenish gray | 4599 hard shale brown |
| 3948 black poker chip shale (core No. 21—3943'-3946') | 4601 hard lime gray |
| 3976 sandy shale brown | 4617 hard sandy shale gray (core No. 30 4614-17') |
| 3998 sticky shale brown | 4629 hard shale tough gray |
| 4003 sandy shale brown (core No. 22 3999½-4002) | 4631 sandy lime hard gray |
| 4008 sandy shale—micaceous gray (core No. 23—4005-4008) | 4636 hard shale tough gray |
| 4042 tough sticky shale dark gray | 4647 sticky shale gray |
| 4049 shaley sand with sticky streaks (core No. 24—4042-4045) | 4661 dark steel gray poker chip shale, very hard with breaks of chalk |
| 4116 shale with sticky shale streaks brown and gray | 4670 dark steel gray poker chip shale hard (core No. 31 4662-4664') |
| 4143 sticky shale green | 4671 sandy lime gray |
| 4150 mucky shale | 4693 dark steel gray poker chip shale very hard |
| 4156 sandy limestone, very hard greenish gray | 4746 hard shale black (core No. 32 4746-49) |
| 4168 black poker chip shale, hard (core No. 25—4156-4158) | 4752 hard steel gray shale (core No. 33 4750-53') |
| 4183 hard shale dark gray | 4760 white chalk, very hard (continuous coring) |
| 4196 hard shale dark gray | 4765 white chalk (core No. 34—4762-65) |
| 4209 hard shale with thin shells | 4780 white chalk |
| 4324 hard shale with sticky streaks (core No. 26—4302-4305) | |
| 4326 hard lime gray | |

4811 broken chalk very hard with little black shale (core No. 38 4813-42)	4865 broken chalk with little shale (core No. 39—4842-4865') 4865 T. D.
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Summary

Clays from 286-366 ft. probably Miocene
537-53 ft. to between 806 & 826 ft. Miocene
806-26 ft. to approximately 900 ft.—Oligocene
960-80 ft. to 1337—Jackson
1337-57 ft. to about 2813-36 ft.—Claiborne
2813-36 ft. to about 3940 ft.—Wilcox
3943 ft. to 4760 ft.—Midway
4760 ft to 4865 ft.—Selma chalk

REMARKS

The logs of the Bollinger, McCorquodale and L. T. Adams (Cottage Hill) wells were printed in Special Report 15, Geological Survey of Alabama, and are not reprinted here. The log of J. C. Prine well is not yet available, since this well was only recently completed.

In Special Report 15 will be found the logs of other wells in this area, the locations of which are not shown on the map.



